

PFASs and decreased Vaccine Response in Guinea-Bissau Children

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SETTING

Guinea-Bissau, West Africa.

Children enrolled in a randomised trial (N=237).

Half received a measles vaccination (MV) at inclusion (4.5 months) and 9 months of age. The other half received a MV at 9 months only.

METHODS

Measles antibody levels were assessed at inclusion, 9 months, and 2 years.

Five PFASs were quantified in serum at inclusion.

Associations between log(PFAS)s and log(measles antibodies) at age 9 months (intervention group) and age 2 years (control group) were examined using linear regression models.

Analyses were adjusted for pre-vaccination antibodies, time since vaccination, sex, duration of breastfeeding, and maternal education. Highly influential points were excluded.

CONCLUSION

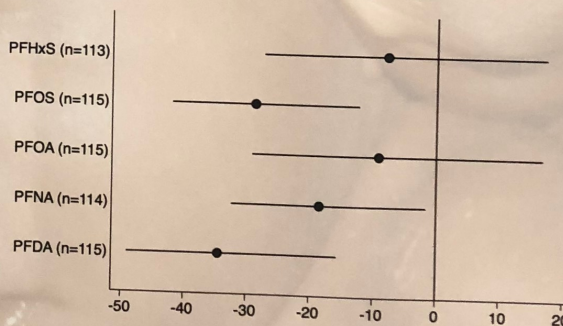
These results from a study of low exposed West African children adds to the burden of evidence suggesting that PFASs are immunotoxic for infants even in small concentrations.

RESULTS

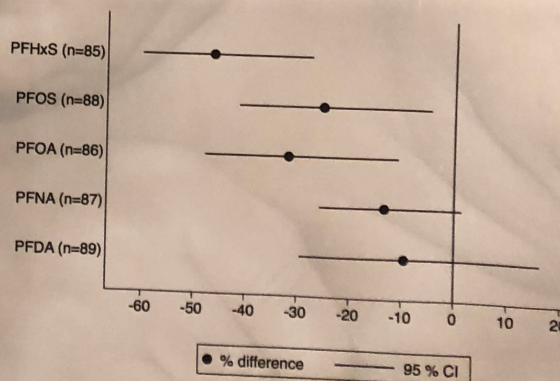
| PFASs (ng/mL) | Median (25-75 percentile) |
|---------------|---------------------------|
| PFHxS (n=237) | 0.10 (0.09-0.14) |
| PFOS (n=237) | 0.77 (0.53-1.02) |
| PFOA (n=237) | 0.68 (0.53-0.92) |
| PFNA (n=236) | 0.21 (0.13-0.31) |
| PFDA (n=237) | 0.19 (0.15-0.25) |

Differences in measles antibody concentration with at doubling of serum-PFAS concentrations

9 months (intervention group)



2 years (control group)



● % difference — 95% CI



BANDIM

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SDU